

The team of consultants, headed by URS Greiner Woodward Clyde, studied the conditions of the watershed, and worked with the City and community to develop projects that improve stormwater management and stream valley conditions. The overall goal of the study was to develop a watershed management plan for improving water quantity and quality control, and for managing stream erosion for the portion of the Rock Creek Watershed within the City of Rockville.

In order to accomplish this goal, the consultants evaluated fifteen existing stormwater management facilities within the watershed to determine potential Best Management Practices (BMPs) for each of the facilities. The consultants also evaluated several miles of stream for potential stream valley restoration using the Rapid Stream Assessment Technique (RSAT). Public meetings, an open house and a community stream walk were held to obtain public comments. From these evaluations the City was able to prioritize the possible retrofit and restoration opportunities. Prioritization criteria included engineering feasibility, cost, public acceptance, environmental sensitivity and other site-specific factors.

The City selected four stormwater management sites for preliminary evaluation. From these preliminary data, the City chose three of these four existing sites, plus a proposed new facility, for the consultants to prepare conceptual designs. The City also selected six stream valley restoration sites for conceptual design based on the results of the RSAT study performed by the consultants.

Based on the results of this watershed study, several conclusions and recommendations regarding the existing condition of the Rock Creek Watershed were made. Structural retrofits are recommended at the following two existing stormwater management facilities:

- Northeast Park
- Redgate Southwest

Retrofitting these facilities with new riser structures that provide extended detention will reduce further erosion downstream of the facilities as well as provide water quality enhancements. The retrofit of the Northeast Park facility would also include a micropool upstream of the new riser structure to help remove sediment and debris. The Redgate Southwest retrofit would include enhanced wetland vegetation in addition to the extended detention.

Nonstructural BMPs are recommended for the existing Redgate Irrigation facility. Water quality conditions can be improved at the Redgate Irrigation facility by enhancing the bank vegetation around the two wet ponds and continuing an integrated management plan to address the safe use of pesticides, herbicides and fertilizers.

Conceptual design alternatives were also evaluated for a new facility in the Calvin Park area. The City has chosen not to pursue this new facility at the time of this report due to the extremely high cost (more than \$1 million) of the proposed alternatives.

The consultants also recommended several stream valley restoration projects, including the following stream segments:

- Calvin Park

- Maryvale
- Redgate
- Rockcrest
- Rockville High School
- Twinbrook

The restoration of these tributaries involves a number of bioengineering solutions including slope stabilization, toe protection, seeding and planting, gabion baskets and riprap protection.

The selected conceptual design projects are recommended to improve the overall conditions in the portion of the Rock Creek Watershed within the City of Rockville. Since many of these proposed improvements are within the same subwatershed, the combination of improvements will provide maximum benefits. The information on other existing sites that were evaluated but not designed is provided in this report for any future studies or projects that would benefit the watershed.